BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

Policy and Rules Concerning the Interstate, Interexchange Marketplace	)	CC Docket No. 96-61
Implementation of Section 254(g) of the Communications Act of 1934, as amended	)	
1998 Biennial Regulatory Review – Review of Customer Premises Equipment and Enhanced Services Unbundling Rules in the Interexchange, Exchange Access and Local Exchange Markets	)	CC Docket No. 98-183

To: The Commission

COMMENTS OF NEXT LEVEL COMMUNICATIONS

In this proceeding, the Commission is again faced with reevaluating its *Computer II* and *Computer III* regulatory framework in light of increased competition in and convergence of communications services. It is appropriate that this proceeding comes on the heels of the Commission's *Section 706 Advanced Services* proceeding[1] because they raise some identical issues. If new technologies and new services are to continue to be developed and deployed, carriers must have adequate flexibility to meet market demand, including the ability to offer services on an integrated basis and to bundle services and customer premises equipment ("CPE"). Next Level Communications ("NLC") makes network and customer premises equipment that enables telephone or cable companies to offer advanced, integrated services from

[1] Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, *Memorandum Opinion and Order, and Notice of Proposed Rulemaking*, FCC 98-188 (August 7, 1998).

a common platform. In order to encourage deployment of these advanced services and promote competition, NLC urges the Commission to permit carriers to bundle broadband CPE with video and high-speed data services.

I. INTRODUCTION AND SUMMARY

Incumbent local exchange carriers ("ILECs") and other carriers trying to enter broadband markets must be free to respond to market demand and competitive challenges. The heavy-handed regulation that fit the rotary-phone era will only forestall, rather than expedite, competition in and deployment of these advanced services. Section 706 of the Telecommunications Act of 1996 directs the Commission to take the necessary regulatory action to encourage the deployment of advanced services. Removing rules that currently prohibit telecommunications carriers from bundling telecommunications services with CPE and that place restrictions on the bundling of telecommunications services with enhanced services is consistent with this statutory mandate.

The Commission adopted its bundling restrictions at a time when AT&T – and the RBOCs after divestiture – dominated the telecommunications services market and owned the CPE market. Twenty-five years later, the landscape has changed dramatically. AT&T is now classified as a nondominant, interexchange carrier. Cable television systems pass 97 percent of television households,[2] and they are rolling out high-speed cable modem and telephony services on an increasingly accelerated basis. Competitive local exchange carriers have entered profitable markets and are serving business and residential subscribers. And with respect to CPE, the retail and vendor markets are highly competitive, and now include everything from basic telephone

---

[2] Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 97-141, *Fourth Annual Report*, 13 FCC Rcd 1034, ¶ 14 (1998).

handsets to sophisticated broadband interface devices that bring video and data services to the home.

In this proceeding, the Commission "seeks to eliminate any existing regulatory requirement that no longer makes sense in light of technological, market and legal conditions."[3] As a result of these extensive changes in the telecommunications and CPE markets, the Commission's bundling restrictions "no longer make sense," and, if not removed, can be expected to retard the deployment of new broadband services.

II. ADVANCED SERVICES PROVIDERS MUST BE ABLE TO BUNDLE CPE AND SERVICES TO COMPETE AGAINST INCUMBENT BROADBAND PROVIDERS.

NLC has developed a state-of-the-art system using xDSL technology – called the NLevel^3 system – that allows advanced services to be delivered over the existing local loop of most carriers.[4] A carrier deploying the NLevel^3 system can simultaneously provide traditional telephone services, high-speed data services, switched digital video, and high-speed Internet access services to a subscriber over a single twisted-copper pair.[5] In order for a consumer to receive these integrated services, the consumer must have a "residential gateway" in the home. This residential gateway allows a consumer to enjoy three separate video streams (that is to say,

---

[3] Policy and Rules Concerning the Interstate, Interexchange Marketplace; Implementation of Section 254(g) of the Communications Act of 1934, as amended; 1998 Biennial Regulatory Review – Review of Customer Premises Equipment and Enhanced Services Unbundling Rules in the Interexchange, Exchange Access and Local Exchange Markets, *Further Notice of Proposed Rulemaking*, FCC 98-258, ¶ 5 (October 9. 1998) ("*Further Notice*").

[4] The term "xDSL" covers a number of Digital Subscriber Loop ("DSL") technologies, including Very High Speed Digital Loop ("VSDL").

[5] Attached is an Appendix that describes in detail NLC's advanced services technology.

three televisions simultaneously exhibiting different programs), voice service, high-speed data service, and high-speed Internet access from the consumer's preferred Internet access provider.

NLC's NLevel^3 system solves the problem of the last mile. It provides an extremely cost-effective means for delivering the full array of advanced services over existing copper plant. However, the residential gateway, which is essential to an integrated offering of video and data services, represents a significant investment and would cost several hundred dollars for a consumer to purchase. To ensure that new technologies and services continue to be deployed, telecommunications carriers must have the flexibility to offer a variety of bundled packages of CPE and broadband services, giving consumers the option to purchase or lease CPE.

This is a case, not unlike others that the Commission has confronted, in which the marketing of packages of CPE and telecommunications services can benefit consumers. The Commission has previously recognized that the high price of CPE can represent the greatest barrier to inducing subscription to a new service.[6] The Commission has stated clearly that bundling presents "an efficient promotional device which reduces barriers to new customers and which can provide new customers with CPE and . . . service more economically than if [bundling] were prohibited."[7] Bundling of CPE and services has been successfully used in cellular and direct broadcast satellite ("DBS") services to allow consumers to avoid high up-front expenditures for equipment.[8] Bundling also allows service providers to offer a variety of marketing plans, thereby providing greater choices for consumers and contributing to

---

6 *See* Bundling of Cellular Customer Premises Equipment and Cellular Service, *Report and Order*, 7 FCC Rcd 4028, 4030 (1992).

7 *Id.*

subscribership growth. Ultimately, the rapid growth of subscribers due to bundling of CPE and service will improve economies of scale, lower the cost of providing service, and lower consumer prices for service and CPE.

DSL services thus offer ILECs (among others) the ability to provide true competition to video and cable modem services. However, for successful deployment of these broadband services, carriers must be able to bundle enhanced services, such as video, and telecommunications services, such as high-speed data, with CPE. This is necessary not only to soften the initially high, up-front equipment costs, but also to allow new entrants to match the marketing packages of the incumbent, dominant broadband providers.

The competitive landscape makes the importance of permitting CPE bundling in this context apparent. For example, cable television systems enjoy broad penetration. The National Cable Television Association (NCTA) reported that 18 of the largest cable companies, and many small ones, are building from that base to launch significant related service roll-outs. Thus, cable systems are rolling out cable modem service in 40 states,[9] and cable systems offering high-speed data services now pass 19 million homes. NCTA projects that they will pass 39 million homes over the next two years.[10] One operator has reported that it provides an increasing

---

[8] *See* Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, *Report and Order*, FCC 98-116, ¶¶ 86-87, 94 (June 24, 1998) (*"Navigational Device Order"*).

[9] *See* Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1986, CC Docket No. 98-146, *Notice of Inquiry*, (August 7, 1998) (*"Section 706 NOI"*), Comments of National Cable Television Association at 8.

[10] *See id.*

number of broadband services to approximately 5 million customers in 17 states.[11] By the end of this year, it is anticipated that cable modems will reach 700,000 users. By contrast, it is estimated that high-speed DLS systems will reach only 25,000 users.[12]

Cable providers are able to bundle video and data services, and those not subject to rate regulation also may bundle CPE with these services. If ILECs and other telecommunications carriers are to compete successfully against dominant cable providers, they must, at a minimum, be able to offer the same types of bundled packages of service and CPE. ILECs have virtually no penetration of the video market and are only now beginning to offer high-speed DSL data services. Accordingly, there will be no anticompetitive effects of allowing ILECs to bundle video and high-speed data services with CPE as they do not have market power in these respective markets.

In the *Navigational Device* proceeding, the Commission declined to extend the prohibition in Section 629 of the Communications Act against bundling navigational devices with video service to all multichannel video programming distributors ("MVPD").[13] Rather, the Commission limited this anti-bundling restriction to dominant MVPDs not subject to effective competition. The Commission found that "narrowly tailoring the [anti-bundling rule] permits new entrants to react quickly to a changing marketplace and provide innovative service offerings to consumers quickly and effectively."[14] This same rationale applies to telecommunications carriers seeking to enter the video and high-speed data services markets.

---

11 *See Section 706 NOI*, Comment of MediaOne at 1.

12 *See* "Net Access: Cable Modems Surge," October 5, 1998, USA Today Online, found at www.usatoday.com/life/cyber/tech/ctd575.htm (visited on October 11, 1998).

13 *Navigational Device Order*, ¶¶ 86-90.

14 *Navigational Device Order*, ¶ 89.

CONCLUSION

Technology is moving toward integrated services, and the Commission's regulatory structure must do the same. The most efficient and economical way for carriers to provide multiple services is on an integrated basis. As markets become more competitive, carriers will have to utilize all available economies and efficiencies to remain competitive. To take full advantage of these efficiencies and to offer consumers the most choices at the lowest prices, carriers must be permitted to bundle video and data services with broadband CPE. Bundling restrictions merely stifle innovation and undermine consumer choice. These kinds of restrictions clearly "no longer make sense" given (1) the robust competition in the CPE market, and (2) the nondominant position of the ILECs in the market for high-speed data and video services.

Respectfully submitted,
NEXT LEVEL COMMUNICATIONS

By: 

Stephen A. Weiswasser
Gerard J. Waldron
Alane C. Weixel
COVINGTON & BURLING
1201 Pennsylvania, Ave., N.W.
Washington, D.C. 20044-7566
(202) 662-6000

Its Attorneys

November 23, 1998

APPENDIX

The NLC system is comprised of a "Broadband Digital Terminal" ("BDT") which is located in a central office or central wire center. Each BDT serves approximately 2000 customers. The BDT is a full-service multiplexer and connects both to a LEC's narrowband Public Switched Telephone Network ("PSTN") and broadband Asynchronous Transfer Mode ("ATM") network. The Broadband Digital Terminal also supports two management systems provided by NLC. One system acts as a traditional operator support system and provides monitoring, alarm reporting and other administrative functions for the NLevel^3 system. The other is a broadband service management system that controls which customers are authorized to receive which video programming services.

The NLevel^3 system can be deployed in either a fiber-to-the-curb ("FTTC") or a fiber-to-the-node architecture ("FTTN"). In a FTTC system, a Broadband Network Unit ("BNU") is placed at a curbside location (including a telephone pole, pedestal or buried area) which is a few hundred feet from the subscriber's home. For down-stream traffic, the BNU is a de-multiplexer that takes a single bit stream coming into it and splits it apart into different services, including voice, data, Internet access and video. The Broadband Network Unit then routes the services to the appropriate customer. For up-stream traffic, the BNU serves as a multiplexer. A BNU typically serves 8 to 16 customers. (Figure 1 demonstrates this fiber-to-the-curb architecture.)

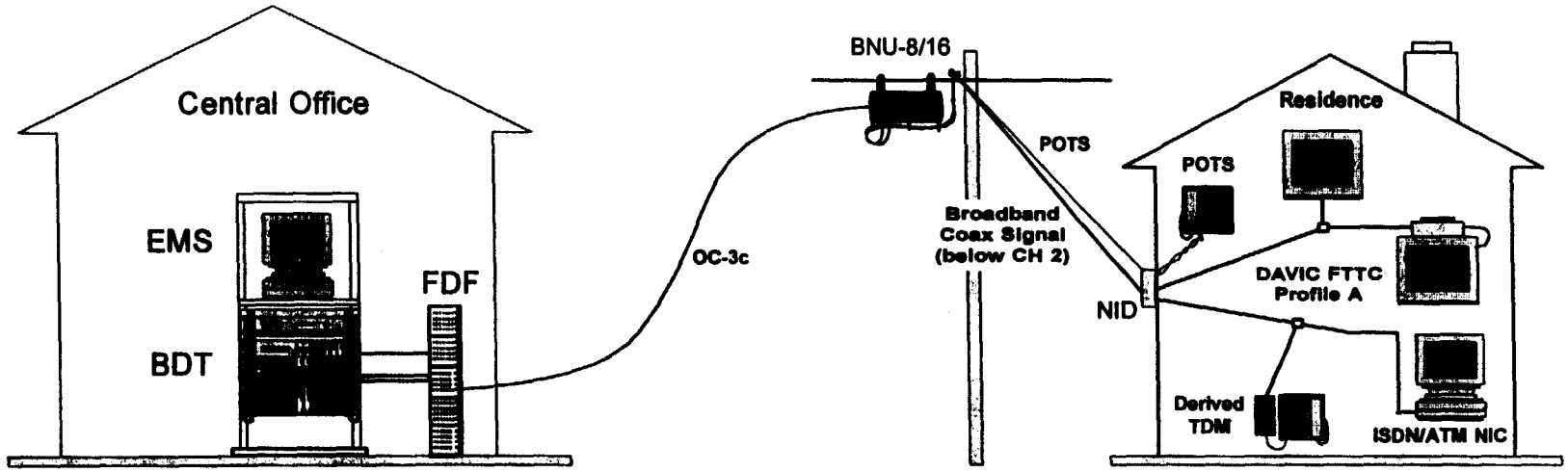
In a fiber-to-the-node architecture, a Universal Service Access Multiplexer ("USAM") is placed at the serving area interface, where the fiber feeder lines meet the cooper distribution lines. The USAM performs the same functions as the Broadband Network Unit and provides the same array of services – voice, data, Internet access and video. The primary

difference is that Universal Service Access Multiplexers can be placed further from the residence than Broadband Network Units. USAMs can serve up to 96 POTS lines. (Figure 2 demonstrates the fiber-to-the-node architecture.)

The consumer interface consists of a single set top box in the consumer's home – called the "residential gateway" – that provides access to telephone, video programming, high-speed data, and Internet access services. An additional network interface installed outside the home and invisible to the consumer connects the house to the network. As described above, the NLevel^3 system allows a consumer to enjoy three separate video streams (that is to say, three separate televisions exhibiting different programs), voice service, and high-speed data service, all at the same time. The NLevel^3 system utilizes internal wiring to the greatest extent possible, so that separate set top boxes are not necessary. The network interface works on a standard Ethernet connection, and a consumer can connect directly to the Internet through an ISP in the same fashion as a dial-up modem connection via conventional phone lines.

In sum, the NLevel^3 system allows incumbent LECs *and other entities* with access to the incumbent LECs' local loops to provide the full array of advanced services – including video – without replacing the existing narrowband network or building a second broadband network. With the NLevel^3 system, incumbent LECs can become viable competitors to incumbent cable operators without having to install coaxial cable or additional fiber.

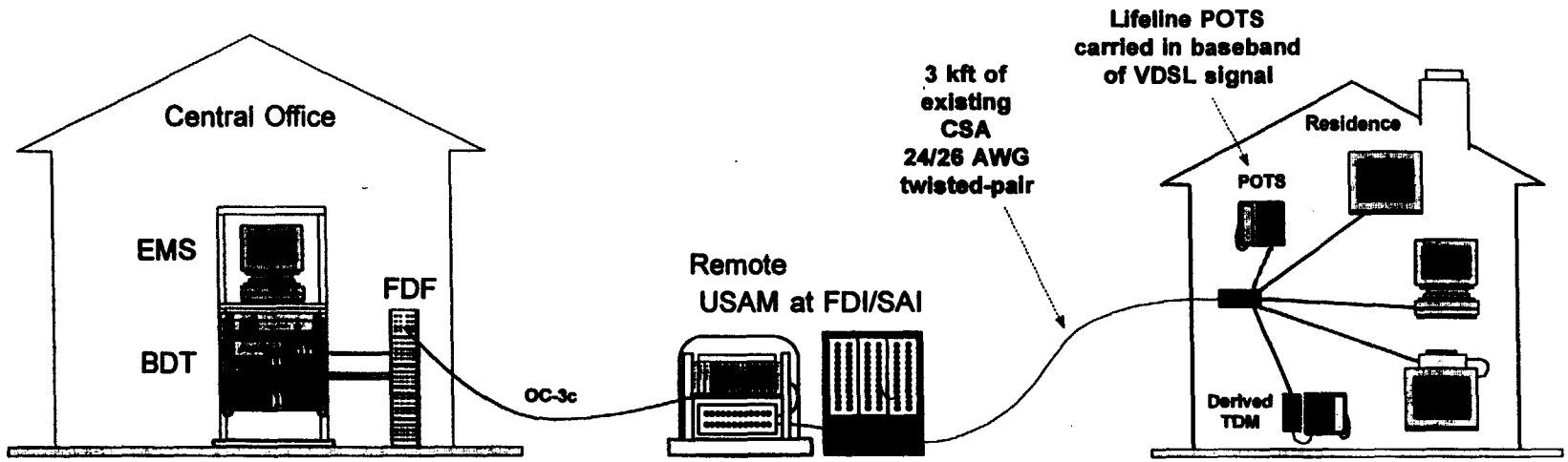
New Growth/Rehab Using FTTC



- Brings a *single* fiber to 8 or 16 home level (BNU-8 or BNU-16)
- Cost parity with existing DLCs – a key design goal and ideal new growth telephony-first strategies, with low incremental broadband upgrade cost
- Compact BNU (<60 lbs.) can be wall, pole, strand or pedestal mounted
- Packaging aimed at installation time and cost reduction

Figure 1

VDSL Overlay for Full Service Support



- For full service network applications, with multiple devices per home supported, VDSL can be provided from a USAM at the FDI/SAI (if FDI/SAI is less than 4000 ft from subscriber)
- Point-to-point VDSL drop terminated in a Residential Gateway which provides home network interfaces without the need for multiple Digital STBs

Figure 2